

AMENDMENTS TO THE CLAIMS:

1. (Currently Amended) A method of providing one of a plurality of schedulers for a multitasking system for a processor, comprising:

AI choosing a particular one of the schedulers, wherein at least one of the plurality of schedulers selects processes to be run from a plurality of runnable processes different from the plurality of schedulers;

setting a program counter to an address corresponding to code of the particular one of the schedulers; and

the processor executing code at an address corresponding to the program counter.

2. (Original) A method, according to claim 1, further comprising:

setting a stack pointer to an address corresponding to stack space for the particular one of the schedulers; and

the processor using the stack space at the stack pointer after executing code at the address corresponding to the program counter.

3. (Original) A method, according to claim 1, wherein all of the schedulers use the same stack.

4. (Original) A method, according to claim 1, wherein choosing a particular one of the schedulers is based on parameters that vary according to run time conditions.

5. (Original) A method, according to claim 4, wherein at least one of the schedulers is for statistical code profiling.

6. (Original) A method, according to claim 4, wherein a first one of the schedulers is for start up conditions and a second one of the schedulers is for steady state operation.

7. (Original) A method, according to claim 1, wherein swapping in one of the plurality of schedulers is performed by setting up a return from an exception that causes the one scheduler to execute.

8. (Original) A method, according to claim 1, wherein setting a program counter includes modifying a variable that is modified according to the particular one of the schedulers that is chosen.

9. (Currently Amended) A method of scheduling tasks in a multitasking operating system, comprising:

choosing a particular one of a plurality of schedulers, wherein at least one of the plurality of schedulers selects processes to be run from a plurality of runnable processes different from the plurality of schedulers; and

running the particular scheduler to schedule tasks.

10. (Currently Amended) A method, according to claim 9, wherein choosing a particular one of the plurality of schedulers is performed by setting up a return from an exception that causes ~~that causes~~ the one scheduler to execute.

11. (Original) A method, according to claim 9, wherein running the particular one of the schedulers includes setting a program counter to an address corresponding to code of the particular one of the schedulers.

12. (Original) A method, according to claim 11, wherein setting a program counter includes modifying a variable that is modified according to the particular one of the schedulers that is chosen.

13. (Original) A method, according to claim 9, further comprising:

setting a stack pointer to an address corresponding to stack space for the particular one of the schedulers; and

the processor using the stack space at the stack pointer after executing code at the address corresponding to the program counter.

14. (Original) A method, according to claim 9, wherein all of the schedulers use the same stack.

15. (Original) A method, according to claim 9, wherein choosing a particular one of the schedulers is based on parameters that vary according to run time conditions.

16. (Original) A method, according to claim 15, wherein at least one of the schedulers is for statistical code profiling.

17. (Original) A method, according to claim 15, wherein a first one of the schedulers is for start up conditions and a second one of the schedulers is for steady state operation.

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18. (New) Computer software that provides one of a plurality of schedulers for a multitasking system for a processor, comprising:

executable code that chooses a particular one of the schedulers, wherein at least one of the plurality of schedulers selects processes to be run from a plurality of runnable processes different from the plurality of schedulers;

executable code that sets a program counter to an address corresponding to code of the particular one of the schedulers; and

executable code that causes the processor to execute code at an address corresponding to the program counter.

19. (New) Computer software, according to claim 18, further comprising:

executable code that sets a stack pointer to an address corresponding to stack space for the particular one of the schedulers; and

executable code that causes the processor to use the stack space at the stack pointer after executing code at the address corresponding to the program counter.

20. (New) Computer software, according to claim 18, wherein all of the schedulers use the same stack.

21. (New) Computer software, according to claim 18, wherein executable code that chooses a particular one of the schedulers uses parameters that vary according to run time conditions.

AI 22. (New) Computer software, according to claim 21, wherein at least one of the schedulers is for statistical code profiling.

23. (New) Computer software, according to claim 21, wherein a first one of the schedulers is for start up conditions and a second one of the schedulers is for steady state operation.

24. (New) Computer software, according to claim 18, wherein executable code that causes the processor to execute code at an address sets up a return from an exception that causes the one scheduler to execute.

25. (New) Computer software, according to claim 18, wherein executable code that sets a program counter modifies a variable according to the particular one of the schedulers that is chosen.

26. (New) Computer software that schedules tasks in a multitasking operating system, comprising:

executable code that chooses a particular one of a plurality of schedulers, wherein at least one of the plurality of schedulers selects processes to be run from a plurality of runnable processes different from the plurality of schedulers; and

executable code that runs the particular scheduler to schedule tasks.

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27. (New) Computer software, according to claim 26, wherein executable code that chooses a particular one of the plurality of schedulers sets up a return from an exception that causes the one scheduler to execute.

28. (New) Computer software, according to claim 26, wherein executable code that runs the particular one of the schedulers sets a program counter to an address corresponding to code of the particular one of the schedulers.

29. (New) Computer software, according to claim 28, wherein setting a program counter includes modifying a variable that is modified according to the particular one of the schedulers that is chosen.

30. (New) Computer software, according to claim 26, further comprising:

executable code that sets a stack pointer to an address corresponding to stack space for the particular one of the schedulers; and

executable code that causes the processor to use the stack space at the stack pointer after executing code at the address corresponding to the program counter.

AI 31. (New) Computer software, according to claim 26, wherein all of the schedulers use the same stack.

32. (New) Computer software, according to claim 26, wherein executable code that chooses a particular one of the schedulers uses parameters that vary according to run time conditions.

33. (New) Computer software, according to claim 32, wherein at least one of the schedulers is for statistical code profiling.

34. (New) Computer software, according to claim 32, wherein a first one of the schedulers is for start up conditions and a second one of the schedulers is for steady state operation.
